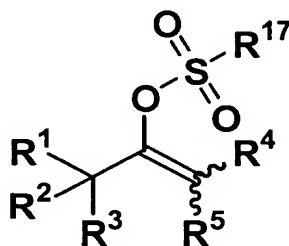


AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

Listing of Claims:

1. (Original) A process for producing a vinyl perfluoroalkanesulfonate derivative represented by general formula (IV):



(IV)

(wherein R¹, R², R³, R⁴ and R⁵ may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted lower alkoxycarbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted lower alkadienyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or unsubstituted cycloalkadienyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyloxy, substituted or unsubstituted aralkyloxycarbonyl, substituted or unsubstituted aryl, substituted or unsubstituted aryloxy, substituted or unsubstituted aryloxycarbonyl, a substituted or unsubstituted heterocyclic group, nitro, nitroso, halogen, carboxy, -S(O)_nR⁶ (wherein

n represents 0 or 1, and R^6 represents substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aryl group), $-P(O)_mR^{6a}R^{6b}$ (wherein m represents 0 or 1, and R^{6a} and R^{6b} may be the same or different and each has the same meaning as R^6 defined above), or $-NR^7R^8$ [wherein R^7 and R^8 may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aryl, substituted or unsubstituted lower alkoxy carbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, $-CONR^{6c}R^{6d}$ (wherein R^{6c} and R^{6d} may be the same or different and each has the same meaning as R^6 defined above), or $-SO_2R^{6e}$ (wherein R^{6e} has the same meaning as R^6 defined above)];

R^1 and R^2 are combined together with the adjacent carbon atom thereto to form R^9 (wherein R^9 represents substituted or unsubstituted cycloalkyl, substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or unsubstituted cycloalkadienyl, or a substituted or unsubstituted heterocyclic group); R^4 and R^5 are combined together with the adjacent carbon atom thereto to form R^{10} (wherein R^{10} has the same meaning as R^9 defined above);

R^1 , R^2 and R^3 are combined together with the adjacent carbon atom thereto to form R^{11} (wherein R^{11} represents substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group);

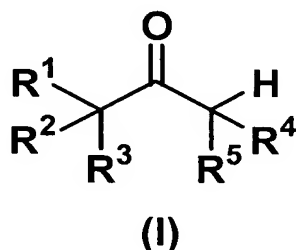
R^1 and R^4 are combined together with the two carbon atoms which are adjacent to R^1 or R^4 , respectively, and the carbon atom between these two carbon atoms to

form a substituted or unsubstituted carbocycle, or a substituted or unsubstituted aliphatic heterocycle; or

R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, a substituted or unsubstituted aliphatic heterocycle, or a substituted or unsubstituted condensed ring, and

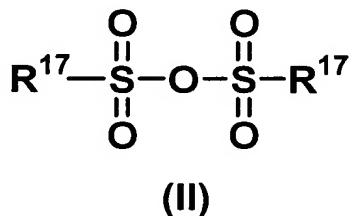
R¹⁷ represents a fluorine atom or perfluoroalkyl)

which comprises reacting a carbonyl compound represented by general formula (I):



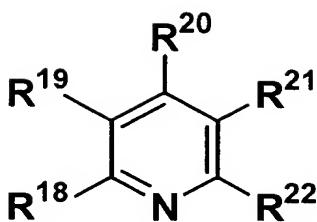
(wherein R¹, R², R³, R⁴ and R⁵ have the same meanings as defined above, respectively)

with a perfluoroalkanesulfonic anhydride represented by general formula (II):



(wherein R¹⁷ has the same meaning as defined above)

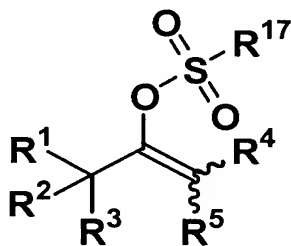
in the presence of a pyridine derivative represented by general formula (III) in an amount of 0.1 to 1.0 equivalent to the perfluoroalkanesulfonic anhydride:



(III)

(wherein R¹⁸, R¹⁹, R²⁰, R²¹ and R²² may be the same or different and each represents a hydrogen atom, halogen, substituted or unsubstituted lower alkyl, or substituted or unsubstituted lower alkoxy; with the proviso that when R¹⁸ and R²² are *tert*-butyl, and R¹⁹ and R²¹ are hydrogen atoms, R²⁰ is not methyl).

2. (Currently Amended) A process for producing a vinyl perfluoroalkanesulfonate derivative represented by general formula (IV):



(IV)

(wherein R¹, R², R³, R⁴, R⁵ and ~~R¹⁷~~ have the same meanings as defined above, respectively) may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted lower alkoxycarbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted lower alkadienyl, substituted or unsubstituted cycloalkyl,

substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl,
substituted or unsubstituted cycloalkadienyl, substituted or unsubstituted aralkyl,
substituted or unsubstituted aralkyloxy, substituted or unsubstituted
aralkyloxycarbonyl, substituted or unsubstituted aryl, substituted or unsubstituted
aryloxy, substituted or unsubstituted aryloxycarbonyl, a substituted or unsubstituted
heterocyclic group, nitro, nitroso, halogen, carboxy, $-S(O)_nR^6$ (wherein n represents
0 or 1, and R^6 represents substituted or unsubstituted lower alkyl, substituted or
unsubstituted aralkyl, or substituted or unsubstituted aryl group),
 $-P(O)_mR^{6a}R^{6b}$ (wherein m represents 0 or 1, and R^{6a} and R^{6b} may be the same or
different and each has the same meaning as R^6 defined above), or $-NR^7R^8$ [wherein
 R^7 and R^8 may be the same or different and each represents a hydrogen atom,
substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl,
substituted or unsubstituted aryl, substituted or unsubstituted lower alkoxy, carbonyl,
substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower
alkanoyloxy, $-CONR^{6c}R^{6d}$ (wherein R^{6c} and R^{6d} may be the same or different and
each has the same meaning as R^6 defined above), or $-SO_2R^{6e}$ (wherein R^{6e} has
the same meaning as R^6 defined above)];
 R^1 and R^2 are combined together with the adjacent carbon atom thereto to form R^9
(wherein R^9 represents substituted or unsubstituted cycloalkyl, substituted or
unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or
unsubstituted cycloalkadienyl, or a substituted or unsubstituted heterocyclic group);
 R^4 and R^5 are combined together with the adjacent carbon atom thereto to form R^{10}
(wherein R^{10} has the same meaning as R^9 defined above);

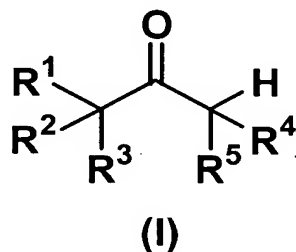
R¹, R² and R³ are combined together with the adjacent carbon atom thereto to form R¹¹ (wherein R¹¹ represents substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group);

R¹ and R⁴ are combined together with the two carbon atoms which are adjacent to R¹ or R⁴, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, or a substituted or unsubstituted aliphatic heterocycle; or

R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, a substituted or unsubstituted aliphatic heterocycle, or a substituted or unsubstituted condensed ring, and

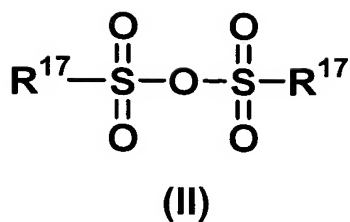
R¹⁷ represents a fluorine atom or perfluoroalkyl)

which comprises adding a carbonyl compound represented by general formula (I):



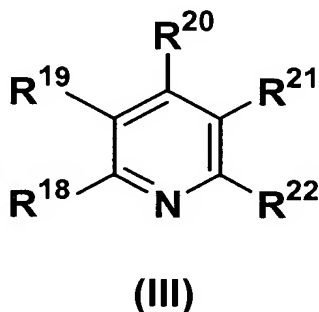
(wherein R¹, R², R³, R⁴ and R⁵ have the same meanings as defined above, respectively)

to a suspension or a solution containing a perfluoroalkanesulfonic anhydride represented by general formula (II):



(wherein R¹⁷ has the same meaning as defined above)

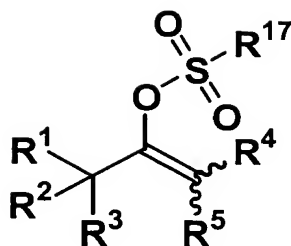
and a pyridine derivative represented by general formula (III) in an amount of 0.1 to 1.0 equivalent to the perfluoroalkanesulfonic anhydride:



(wherein R¹⁸, R¹⁹, R²⁰, R²¹ and R²² have the same meanings as defined above, respectively) may be the same or different and each represents a hydrogen atom, halogen, substituted or unsubstituted lower alkyl, or substituted or unsubstituted lower alkoxy; with the proviso that when R¹⁸ and R²² are *tert*-butyl, and R¹⁹ and R²¹ are hydrogen atoms, R²⁰ is not methyl), and wherein

when the content of the pyridine derivative represented by general formula (III) in the suspension or the solution is 1.0 equivalent to the perfluoroalkanesulfonic anhydride represented by general formula (II), the perfluoroalkanesulfonic anhydride represented by general formula (II), water, an acid, or an acid anhydride is further added for the reaction.

3. (Currently Amended) A process for producing a vinyl perfluoroalkanesulfonate derivative represented by general formula (IV):



(IV)

(wherein R¹, R², R³, R⁴, and R⁵ ~~and R¹⁷~~ have the same meanings as defined above, respectively) may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted lower alkoxy carbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted lower alkadienyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or unsubstituted cycloalkadienyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyloxy, substituted or unsubstituted aralkyloxy carbonyl, substituted or unsubstituted aryl, substituted or unsubstituted aryloxy, substituted or unsubstituted aryloxy carbonyl, a substituted or unsubstituted heterocyclic group, nitro, nitroso, halogen, carboxy, -S(O)_nR⁶ (wherein n represents 0 or 1, and R⁶ represents substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aryl group), -P(O)_mR^{6a}R^{6b} (wherein m represents 0 or 1, and R^{6a} and R^{6b} may be the same or different and each has the same meaning as R⁶ defined above), or -NR⁷R⁸ [wherein R⁷ and R⁸ may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl,

substituted or unsubstituted aryl, substituted or unsubstituted lower alkoxycarbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, -CONR^{6c}R^{6d} (wherein R^{6c} and R^{6d} may be the same or different and each has the same meaning as R⁶ defined above), or -SO₂R^{6e} (wherein R^{6e} has the same meaning as R⁶ defined above)];

R¹ and R² are combined together with the adjacent carbon atom thereto to form R⁹ (wherein R⁹ represents substituted or unsubstituted cycloalkyl, substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or unsubstituted cycloalkadienyl, or a substituted or unsubstituted heterocyclic group);

R⁴ and R⁵ are combined together with the adjacent carbon atom thereto to form R¹⁰ (wherein R¹⁰ has the same meaning as R⁹ defined above);

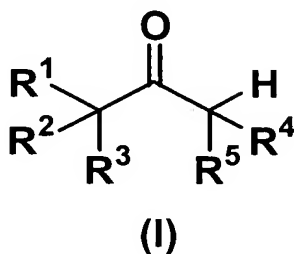
R¹, R² and R³ are combined together with the adjacent carbon atom thereto to form R¹¹ (wherein R¹¹ represents substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group);

R¹ and R⁴ are combined together with the two carbon atoms which are adjacent to R¹ or R⁴, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, or a substituted or unsubstituted aliphatic heterocycle; or

R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, a substituted or unsubstituted aliphatic heterocycle, or a substituted or unsubstituted condensed ring, and

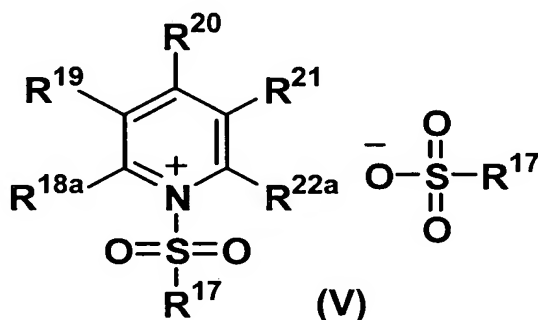
R¹⁷ represents a fluorine atom or perfluoroalkyl)

which comprises reacting a carbonyl compound represented by general formula (I):



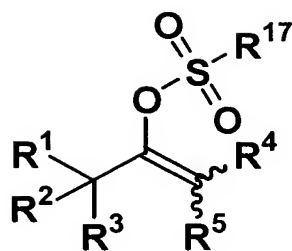
(wherein R¹, R², R³, R⁴ and R⁵ have the same meanings as defined above, respectively)

with a 1-(perfluoroalkanesulfonyl)pyridinium perfluoroalkanesulfonate represented by general formula (V):



(wherein R¹⁹, R²⁰ and R²¹ ~~have the same meanings as defined above,~~
respectively may be the same or different and each represents a hydrogen atom,
halogen, substituted or unsubstituted lower alkyl, or substituted or unsubstituted
lower alkoxy, and R^{18a} and R^{22a} may be the same or different and each represents
 a hydrogen atom, methyl, ethyl, *n*-propyl, isopropyl, methoxy, ethoxy, *n*-propyloxy, or
 isopropyloxy).

4. (Currently Amended) A process for producing a vinyl
 perfluoroalkanesulfonate derivative represented by general formula (IV):



(IV)

(wherein R^1 , R^2 , R^3 , R^4 , and R^5 and R^{17} have the same meanings as defined above, respectively)may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted lower alkoxy carbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkynyl, substituted or unsubstituted lower alkadienyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or unsubstituted cycloalkadienyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyloxy, substituted or unsubstituted aralkyloxycarbonyl, substituted or unsubstituted aryl, substituted or unsubstituted aryloxy, substituted or unsubstituted aryloxycarbonyl, a substituted or unsubstituted heterocyclic group, nitro, nitroso, halogen, carboxy, $-S(O)_nR^6$ (wherein n represents 0 or 1, and R^6 represents substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aryl group), $-P(O)_mR^{6a}R^{6b}$ (wherein m represents 0 or 1, and R^{6a} and R^{6b} may be the same or different and each has the same meaning as R^6 defined above), or $-NR^7R^8$ [wherein R^7 and R^8 may be the same or different and each represents a hydrogen atom, substituted or unsubstituted lower alkyl, substituted or unsubstituted aralkyl,

substituted or unsubstituted aryl, substituted or unsubstituted lower alkoxy carbonyl, substituted or unsubstituted lower alkanoyl, substituted or unsubstituted lower alkanoyloxy, -CONR^{6c}R^{6d} (wherein R^{6c} and R^{6d} may be the same or different and each has the same meaning as R⁶ defined above), or -SO₂R^{6e} (wherein R^{6e} has the same meaning as R⁶ defined above)];

R¹ and R² are combined together with the adjacent carbon atom thereto to form R⁹ (wherein R⁹ represents substituted or unsubstituted cycloalkyl, substituted or unsubstituted cycloalkenyl, substituted or unsubstituted cycloalkynyl, substituted or unsubstituted cycloalkadienyl, or a substituted or unsubstituted heterocyclic group);
R⁴ and R⁵ are combined together with the adjacent carbon atom thereto to form R¹⁰ (wherein R¹⁰ has the same meaning as R⁹ defined above);

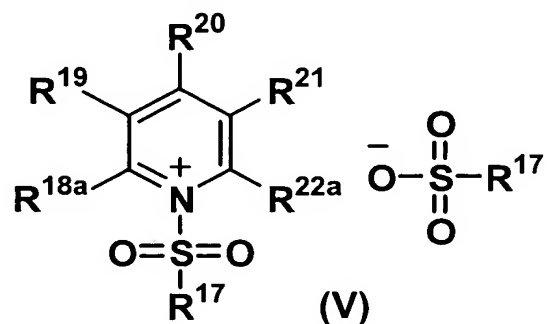
R¹, R² and R³ are combined together with the adjacent carbon atom thereto to form R¹¹ (wherein R¹¹ represents substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group);

R¹ and R⁴ are combined together with the two carbon atoms which are adjacent to R¹ or R⁴, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, or a substituted or unsubstituted aliphatic heterocycle; or

R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, a substituted or unsubstituted aliphatic heterocycle, or a substituted or unsubstituted condensed ring,
and

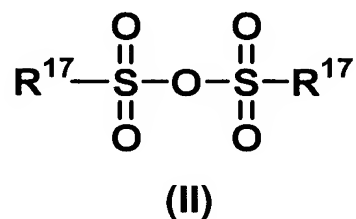
R¹⁷ represents a fluorine atom or perfluoroalkyl)

which comprises preparing a 1-(perfluoroalkanesulfonyl)pyridinium
perfluoroalkanesulfonate represented by general formula (V):



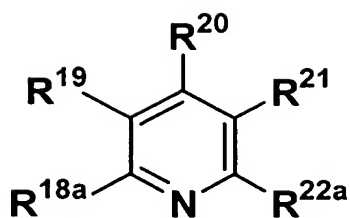
(wherein ~~R^{18a}, R¹⁹, R²⁰, R²¹ and R^{22a}~~ have the same meanings as defined above, respectively) (wherein R¹⁹, R²⁰ and R²¹ have the same meanings as defined above, respectively may be the same or different and each represents a hydrogen atom, halogen, substituted or unsubstituted lower alkyl, or substituted or unsubstituted lower alkoxy, and R^{18a} and R^{22a} may be the same or different and each represents a hydrogen atom, methyl, ethyl, *n*-propyl, isopropyl, methoxy, ethoxy, *n*-propyloxy, or isopropyloxy)

from a perfluoroalkanesulfonic anhydride represented by general formula (II):



(wherein R¹⁷ has the same meanings as defined above)

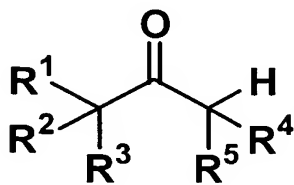
and a pyridine derivative represented by general formula (IIIa):



(IIIa)

(wherein R^{18a}, R¹⁹, R²⁰, R²¹ and R^{22a} have the same meanings as defined above, respectively);

and then reacting the resulting 1-(perfluoroalkanesulfonyl)pyridinium perfluoroalkanesulfonate with a carbonyl compound represented by general formula (I):



(I)

(wherein R¹, R², R³, R⁴, and R⁵ have the same meanings as defined above, respectively).

5. (Currently Amended) The process according to claim 1-~~or~~2, wherein R¹⁸ and R²² may be the same or different and each represents a hydrogen atom, methyl, ethyl, *n*-propyl, isopropyl, methoxy, ethoxy, *n*-propyloxy, or isopropyloxy.

6. (Currently Amended) The process according to claim 1-~~or~~2, wherein R¹⁸ and R²² may be the same or different and each represents a hydrogen atom, halogen, or methyl.

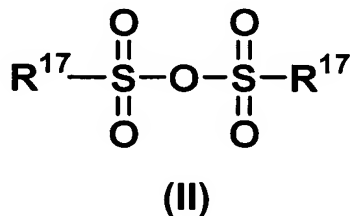
7. (Currently Amended) The process according to ~~any one of claims~~ claim 1 to 6, wherein R¹⁹ and R²¹ represent a hydrogen atom.

8. (Original) The process according to claim 7, wherein R²⁰ represents a hydrogen atom or methyl.

9. (Currently Amended) The process according to claim 1-~~or~~2, wherein R¹⁸, R¹⁹, R²⁰, R²¹, and R²² represent a hydrogen atom.

10. (Currently Amended) The process according to claim 3-~~or~~4, wherein R^{18a}, R¹⁹, R²⁰, R²¹, and R^{22a} represent a hydrogen atom.

11. (Currently Amended) The process according to ~~any one of claims~~ claim 1 to 10, wherein the perfluoroalkanesulfonic anhydride represented by general formula (II), water, an acid, or an acid anhydride is further added during the reaction of the perfluoroalkanesulfonic anhydride represented by general formula (II):



(wherein R¹⁷ has the same meaning as defined above).

12. (Currently Amended) The process according to ~~any one of claims~~ claim 1 to 11, wherein R¹⁷ represents a fluorine atom, trifluoromethyl, or nonafluoro-*n*-butyl.

13. (Currently Amended) The process according to ~~any one of claims~~ claim 1 to 11, wherein R¹⁷ represents a fluorine atom or trifluoromethyl.

14. (Currently Amended) The process for producing a vinyl perfluoroalkanesulfonate derivative according to ~~any one of claims~~ claim 1 to 13, wherein at least one selected from the group consisting of methylene chloride, toluene, chlorobenzene, trifluorotoluene, and dichlorobenzene is used as the solvent.

15. (Currently Amended) The process for producing a vinyl perfluoroalkanesulfonate derivative according to ~~any one of claims~~ claim 1 to 14, wherein R¹ and R⁴ are combined together with the two carbon atoms which are adjacent to R¹ or R⁴, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, or a substituted or unsubstituted aliphatic heterocycle; or R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, a substituted or unsubstituted aliphatic heterocycle, or a substituted or unsubstituted condensed ring.

16. (Currently Amended) The process for producing a vinyl perfluoroalkanesulfonate derivative according to ~~any one of claims~~ claim 1 to 14, wherein R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle.

17. (Currently Amended) The process for producing a vinyl perfluoroalkanesulfonate derivative according to ~~any one of claims~~ claim 1 to 14, wherein R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted condensed ring.

18. (New) The process according to claim 2, wherein R¹⁸ and R²² may be the same or different and each represents a hydrogen atom, methyl, ethyl, *n*-propyl, isopropyl, methoxy, ethoxy, *n*-propyloxy, or isopropyloxy.

19. (New) The process according to claim 2, wherein R¹⁸ and R²² may be the same or different and each represents a hydrogen atom, halogen, or methyl.

20. (New) The process according to claim 2, wherein R¹⁹ and R²¹ represent a hydrogen atom.

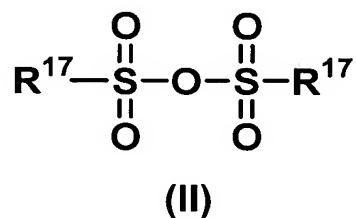
21. (New) The process according to claim 2, wherein R¹⁸, R¹⁹, R²⁰, R²¹, and R²² represent a hydrogen atom.

22. (New) The process according to claim 3, wherein R¹⁹ and R²¹ represent a hydrogen atom.

23. (New) The process according to claim 4, wherein R¹⁹ and R²¹ represent a hydrogen atom.

24. (New) The process according to claim 4, wherein R^{18a}, R¹⁹, R²⁰, R²¹, and R^{22a} represent a hydrogen atom.

25. (New) The process according to claim 3, wherein the perfluoroalkanesulfonic anhydride represented by general formula (II), water, an acid, or an acid anhydride is further added during the reaction of the perfluoroalkanesulfonic anhydride represented by general formula (II):



(wherein R¹⁷ has the same meaning as defined above).

26. (New) The process according to claim 3, wherein R¹⁷ represents a fluorine atom, trifluoromethyl, or nonafluoro-*n*-butyl.

27. (New) The process according to claim 3, wherein R¹⁷ represents a fluorine atom or trifluoromethyl.

28. (New) The process for producing a vinyl perfluoroalkanesulfonate derivative according to claim 3, wherein at least one selected from the group consisting of methylene chloride, toluene, chlorobenzene, trifluorotoluene, and dichlorobenzene is used as the solvent.

29. (New) The process for producing a vinyl perfluoroalkanesulfonate derivative according to claim 3, wherein R¹ and R⁴ are combined together with the two carbon atoms which are adjacent to R¹ or R⁴, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, or a substituted or unsubstituted aliphatic heterocycle; or R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle, a substituted or unsubstituted aliphatic heterocycle, or a substituted or unsubstituted condensed ring.

30. (New) The process for producing a vinyl perfluoroalkanesulfonate derivative according to claim 3, wherein R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted carbocycle.

31. (New) The process for producing a vinyl perfluoroalkanesulfonate derivative according to claim 3, wherein R¹, R², R³, R⁴ and R⁵ are combined together with the two carbon atoms which are adjacent to R¹, R², R³, R⁴ or R⁵, respectively, and the carbon atom between these two carbon atoms to form a substituted or unsubstituted condensed ring.